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## DIAGNOSIS AND SPECTRUM OF CLINICAL COMPLICATIONS OF TATTOOING

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**Background:** Clinical complications of tattooing were reported centuries back and depend on the society and tattoo inks and techniques at any time. Complications in the medical literature were mainly individual cases, and a large recent material has not been published.

**Aim:** To describe the panorama of medical and other complications of tattoos as diagnosed in the Tattoo Clinic since 2008.

**Methods:** The clinic has access to histopathology, microbiology, allergy patch testing, 20 MHz ultrasound, laser therapy and surgery. The material presently includes over 500 manifestations in 370 patients. All reported cases were hospital cases.

**Results:** *Bacterial infections* dominated by staphylococcal infections and manifested as local, regional and systemic infections including cases of sepsis requiring intravenous therapy is a large group. The sources are the tattoo ink and the procedure. Viral infections included warts, herpes simplex and pericarditis. *Allergy in red tattoos*, mostly seen as plaque-elevation with a "lichenoid" appearance but also seen as deep ulceration or excessive hyperkeratosis is another large group. Lilac, green and blue tattoos also may develop allergy. Standard treatment offered is surgery with dermatome shaving for safe removal of the pigment in the dermis. Lasers are relatively contraindicated. Nickel and parabens in inks can produce severe eczema shortly after the tattoo is made. Urticarial reaction also may develop as may photosensitivity. A case of life threatening latex allergy was diagnosed. *Black tattoo reactions* explained by pigment agglomeration and foreign body formation thus non allergic was a large group offered dermatome shaving if topical corticoids failed. *Psycho-social complications*, i.e. gang members in exit programs is a significant group treated with lasers. The clinic cannot offer laser removal in case of regret. *Miscellaneous cases* include neurologic cases with invalidating pain, sarcoidosis, vasculitis, autoimmunity with ulceration and leg amputation. *Complications due to tattooing* and needle trauma such as scarring were seen. *Cases of skin cancer* and regional lymph node malignancy related to tattoo pigment were neither seen in the tattoo clinic nor in the skin oncology clinic of the department of dermatology. The vast majority of patients with complications had their tattoos made in professional parlors.

**Conclusions:** Tattoo complications are cumbersome, clinically distinct and referred to different disease mechanisms. The prominent complications are bacterial infections, allergy in red tattoos, pigment agglomeration in black tattoos and psycho-social problems. Complications include exceptional cases and can be life threatening or invalidate the sufferer. Complications are dependent on the tattoo and the tattooed person and his individual predisposition to develop some distinct complication.